AMENDATORY SECTION (Amending WSR 98-24-096, filed 12/1/98, effective 3/1/99)

WAC 296-307-009 What definitions apply to this chapter? **"Approved"** means approved by the director of the department of labor and industries, or by another organization designated by the department. Also means listed or approved by a nationally recognized testing laboratory.

"Authorized person" means someone you have approved to perform specific duties or to be at a specific location on the job site.

"Biological agents" means organisms or their by-products.

"Chemical agents (airborne or contact)" means a chemical agent is any of the following:

✎ Airborne chemical agent which is any of the following:

- Dust - solid particles suspended in air, generated by handling, drilling, crushing, grinding, rapid impact, detonation, or decrepitation of organic or inorganic materials such as rock, ore, metal, coal, wood, grain, etc.

- Fume - solid particles suspended in air, generated by condensation from the gaseous state, generally after volatilization from molten metals, etc., and often accompanied by a chemical reaction such as oxidation.

- Gas - a normally formless fluid that can be changed to the liquid or solid state by the effect of increased pressure or decreased temperature or both.

- Mist - liquid droplets suspended in air, generated by condensation from the gaseous to the liquid state or by breaking up a liquid into a dispersed state, such as by splashing, foaming or atomizing.

- Vapor - the gaseous form of a substance that is normally in the solid or liquid state.

✎ Contact chemical agent which is any of the following:

- Corrosives - substances that in contact with living tissue cause destruction of the tissue by chemical action.

- Irritants - substances that on immediate, prolonged, or repeated contact with normal living tissue will induce a local inflammatory reaction.

- Toxicants - substances that have the inherent capacity to produce personal injury or illness to individuals by absorption through any body surface.

"Department" means the department of labor and industries. When this chapter refers to "we" or "us," it means labor and industries staff responsible for enforcing the Washington Industrial Safety and Health Act (WISHA).

"Director" means the director of the department of labor and industries, or a designated representative.

"Employee" means someone providing personal labor in the business of the employer, including anyone providing personal labor under an independent contract.

"Employer" means a business entity having one or more employees. Also, any person, partnership, or business entity with no employees but having industrial insurance coverage is both an employer and an employee. When this chapter refers to "you," it means the employer or a designated representative.

"Hazard" means a condition that can cause injury, death, or occupational disease.

"Listed" means listed by a nationally recognized testing laboratory.

"Must" means mandatory.

"Nationally recognized testing laboratory" See 29 CFR 1910.7 (federal OSHA requirements).

"Pesticide" means:

- Any substance intended to prevent, destroy, control, repel, or mitigate any insect, rodent, snail, slug, fungus, weed, and any other form of plant or animal life or virus, except virus on or in a living person or other animal which is normally considered to be a pest or which the director may declare to be a pest;
- Any substance or mixture of substances intended to be used as a plant regulator, defoliant or desiccant; and
- Any spray adjuvant, such as a wetting agent, spreading agent, deposit builder, adhesive, emulsifying agent, deflocculating agent, water modifier, or similar agent with or without toxic properties of its own, intended to be used with any pesticide as an aid to its application or effect, and sold in a package or container separate from that of the pesticide with which it is to be used.

"Safety factor" means the ratio of the ultimate breaking strength of a piece of material or equipment to the actual working stress or safe load when in use.

"Should" or **"may"** means recommended.

"Standard safeguard" means a device designed and constructed to remove a hazard related to the machine, appliance, tool, building, or equipment to which it is attached.

"Working day," for appeals and accident reporting, means a calendar day, except Saturdays, Sundays, and legal holidays as defined by RCW 1.16.050. To compute the time within which an act is to be completed, exclude the first working day and include the last.

AMENDATORY SECTION (Amending WSR 01-17-033, filed 8/8/01, effective 9/1/01)

WAC 296-307-018 What are the employer's responsibilities?

You must:

(1) Provide a safe and healthful working environment.

(2) Ensure that employees do not use defective or unsafe tools and equipment, including tools and equipment that may be furnished by the employee.

(3) Implement a written accident prevention program as required by these standards.

(4) Implement a hazard communication program as required by WAC 296-307-550.

(5) Establish a system for reporting and recording accidents on the OSHA 200 log. (See chapter 296-27 WAC.)

(6) Provide safety education and training programs.

(7) Implement the requirements of WAC 296-62-074 through 296-62-07451 to ensure the safety of employees who are exposed to cadmium in the workplace.

(8) Implement the requirements of WAC 296-62-145 through 296-62-14529 to ensure the safety of employees who are exposed to confined spaces in the workplace.

(9) Control chemical agents.

You must:

- Control chemical agents in a manner that they will not present a hazard to your workers; or
- Protect workers from the hazard of contact with, or exposure to, chemical agents.

Reference: Pesticides are chemical agents and are covered by chapter 296-307 WAC Part I, Pesticides (worker protection standard). Pesticides may also be covered by chapter 296-62 WAC Part E, Respiratory protection.

(10) Protect employees from biological agents.

You must:

- Protect employees from exposure to hazardous concentrations of biological agents that may result from processing, handling or using materials or waste.

Note: Examples of biological agents include:
– Animals or animal waste
– Body fluids
– Biological agents in a medical research lab
– Mold or mildew

NEW SECTION

WAC 296-307-03930 Make sure emergency washing facilities are functional and readily accessible.

You must:

✎ Provide an emergency shower:

– When there is potential for major portions of an employee's body to contact corrosives, strong irritants, or toxic chemicals

– That delivers water to cascade over the user's entire body at a minimum rate of 20 gallons (75 liters) per minute for fifteen minutes or more.

✎ Provide an emergency eyewash:

– When there is potential for an employee's eyes to be exposed to corrosives, strong irritants, or toxic chemicals

– That irrigates and flushes both eyes simultaneously while the user holds their eyes open

– With an on-off valve that activates in one second or less and remains on without user assistance until intentionally turned off

– That delivers at least 0.4 gallons (1.5 liters) of water per minute for fifteen minutes or more.

Note: Chemicals that require emergency washing facilities:

✎ You can determine whether chemicals in your workplace require emergency washing facilities by looking at the material safety data sheet (MSDS) or similar documents. The MSDS contains information about first-aid requirements and emergency flushing of skin or eyes

✎ For chemicals developed in the workplace, the following resources provide information about first-aid requirements:

– NIOSH Pocket Guide to Chemical Hazards
.*DHHS (NIOSH) Publication No. 97-140
.*http://www.cdc.gov/niosh/npg/ggdstart.html
– Threshold Limit Values for Chemical Substances and Physical Agents American Conference of Governmental Industrial Hygienists (ACGIH).

You must:

✎ Make sure emergency washing facilities:

– Are located so that it takes no more than ten seconds to reach

– Are kept free of obstacles blocking their use

– Function correctly

– Provide the quality and quantity of water that is satisfactory for emergency washing purposes.

Note: ✎ If water in emergency washing facilities is allowed to freeze, they will not function correctly. Precautions need to be taken to prevent this from happening

✎ The travel distance to an emergency washing facility should be no more than fifty feet (15.25 meters)

✎ For further information on the design, installation, and maintenance of emergency washing facilities, see American National Standards Institute (ANSI) publication Z358.1 - 1998, *Emergency Eyewash and Shower Equipment*. Emergency washing facilities that are designed to meet ANSI Z358.1 - 1998 also meet the requirements of this standard. The ANSI standard can be obtained from the American National Standards Institute, 1430 Broadway, New York, New York 10018.

Reference: ✎ Training in the location and use of your emergency washing facilities is required under the employer chemical hazard communication rule, WAC 296-307-550, and the accident prevention program rule, WAC 296-307-030.

SECTION

WAC 296-307-03935 Inspect and activate your emergency washing facilities.

You must:

✎ Make sure all plumbed emergency washing facilities are inspected once a year to make sure they function correctly.

Note: Inspections should include:
- ✎ Examination of the piping
- ✎ Making sure that water is available at the appropriate temperature and quality
- ✎ Activation to check that the valves and other hardware work properly
- ✎ Checking the water flow rate.

You must:

✎ Make sure plumbed emergency eyewashes and hand-held drench hoses are activated weekly to check the proper functioning of the valves, hardware, and availability of water

✎ Make sure all self-contained eyewash equipment and personal eyewash units are inspected and maintained according to manufacturer instructions.

– Inspections to check proper operation must be done once a year

– Sealed personal eyewashes must be replaced after the manufacturer's expiration date.

Note: Most manufacturers recommend replacing fluid in open self-contained eyewashes every six months. The period for sealed containers is typically two years.

NEW SECTION

WAC 296-307-03940 Make sure supplemental flushing equipment provides sufficient water.

Note: Supplemental flushing equipment cannot be used in place of required emergency showers or eyewashes.

You must:

✎ Make sure hand-held drench hoses deliver at least 3.0 gallons (11.4 liters) of water per minute for fifteen minutes or more.

Note: Why use a drench hose? A drench hose is useful when:
- ✎ The spill is small and does not require an emergency shower
- ✎ Used with a shower for local rinsing, particularly on the lower extremities.

You must:

✎ Make sure personal eyewash equipment delivers only clean water or other medically approved eye flushing solutions.

NEW SECTION

WAC 296-307-03945 Definitions.

Corrosive

As used in first aid, WAC 296-307-039, is a substance that causes destruction of living tissue by chemical action, including acids with a pH of 2.5 or below or caustics with a pH of 11.0 or above.

Emergency washing facilities

Emergency washing facilities are emergency showers, eyewashes, eye/face washes, hand-held drench hoses, or other similar units.

Hand-held drench hoses

Hand-held drench hoses are single-headed emergency washing devices connected to a flexible hose that can be used to irrigate and flush the face or other body parts.

Personal eyewash units

Personal eyewash units are portable, supplementary units that support plumbed units or self-contained units, or both, by delivering immediate flushing for less than fifteen minutes.

Strong irritant

As used in first aid, WAC 296-307-039, is a chemical that is not corrosive, but causes a strong, temporary inflammatory effect on living tissue by chemical action at the site of contact.

Toxic chemical

As used in first aid, WAC 296-307-039, is a chemical that produces serious injury or illness when absorbed through any body surface.

AMENDATORY SECTION (Amending WSR 98-24-096, filed 12/1/98, effective 3/1/99)

WAC 296-307-40013 What requirements apply to the construction, original test, and requalification of nonrefrigerated containers? The code is the Unfired Pressure Vessel Code of the American Society of Mechanical Engineers (Section VIII of the ASME Boiler Construction Code), 1952, 1956, 1959, 1962, 1965, 1968 and 1971 editions, the joint code of the American Petroleum Institute and the American Society of Mechanical Engineers (API-ASME Code) 1951 edition, and amendments or later editions, as adopted.

(1) Containers used with systems covered in WAC 296-307-40005 and 296-307-40007 must be constructed and tested according to the code.

Exception: Construction under Table UW-12 at a basic joint efficiency of under 80% is prohibited. Containers built according to code are exempt from paragraphs UG-125 to UG-128, inclusive, and paragraphs UG-132 and UG-133 of the code.

Note: This subsection allows the continued use or reinstallation of containers constructed and maintained according to the 1949, 1950, 1952, 1956, 1959, 1962, 1965 and 1968 editions of the Unfired Pressure Vessel Code of the ASME or any revisions thereof in effect at the time of fabrication.

(2) Containers more than 36 inches in diameter or 250 gallons water capacity must be constructed to meet one or more of the following requirements:

(a) Containers must be stress relieved after fabrication according to the code; or

(b) Cold-formed heads, when used, must be stress relieved; or

(c) Hot-formed heads must be used.

(3) Welding to the shell, head, or any other part of the container subject to internal pressure must be according to the code. Other welding is permitted only on saddle plates, lugs, or brackets attached to the container by the container manufacturer.

Containers used with systems covered in subsection (4) of this section must be constructed and tested in accordance with the DOT specifications.

(4) Containers must comply with department of transportation specifications and must be maintained, filed, packaged, marked, labeled and shipped to comply with current DOT regulations and American National Standard Method of Marking Portable Compressed Gas Containers to Identify the Material Contained, Z48.1-1954 R1970. See Appendix C for availability.

AMENDATORY SECTION (Amending WSR 98-24-096, filed 12/1/98, effective 3/1/99)

WAC 296-307-40015 How must nonrefrigerated containers and systems (other than DOT containers) be marked? (1) System nameplates, when required, must be permanently attached to the system so they are readily accessible for inspection.

(2) Each container or system covered in WAC 296-307-40005 and 296-307-40007 must be marked as follows:

(a) With indication that the container or system meets the requirements of the code under which the container is constructed.

(b) With indication on the container and system nameplate when the system is designed for underground installation.

(c) With the name and address of the supplier of the container or the trade name of the container and with the date of fabrication.

(d) With the water capacity of the container in pounds at 60☜F or gallons, United States standard.

(e) With the design pressure in pounds per square inch gauge.

(f) With the wall thickness of the shell and heads.

(g) With indication of the maximum fill level for liquid anhydrous ammonia between 20°F and 100°F. Markings must be in increments of not more than 20°F.

Exception: Containers with fixed maximum level indicators, such as fixed length dip tubes, or containers that are filled by weight are exempt from this requirement.

(h) With the outside surface area in square feet.

(i) With minimum temperature in Fahrenheit for which the container is designed.

(j) The marking must be on the container itself or on a permanently attached nameplate.

(3) All main operating valves on permanently installed containers with a capacity of over 3,000 water gallons must be identified to show whether the valve is in liquid or vapor service. The valve must be identified as follows:

(a) The word LIQUID (or LIQUID VALVE), VAPOR (or VAPOR VALVE), as appropriate, must be placed on or within twelve inches of the valve by means of a stencil tag or decal.

(b) Liquid valves must be painted orange and vapor valves must be painted yellow. The legend ORANGE-LIQUID, YELLOW-VAPOR must be displayed in one or more conspicuous places at each permanent storage location. The legend must have letters at least two inches high and must be placed against a contrasting background.

(4) "Marking refrigerated containers." Each refrigerated container must be marked with a name plate on the outer covering in an accessible place as specified in the following:

- With the notation, "Anhydrous Ammonia"
- With the name and address of the builder and the date of fabrication
- With the water capacity of the container in gallons, U.S. Standard
- With the design pressure
- With the minimum temperature in degrees Fahrenheit for which the container was designed
- The maximum allowable water level to which the container may be filled for test purposes
- With the density of the product in pounds per cubic foot for which the container was designed
- With the maximum level to which the container may be filled with liquid anhydrous ammonia.

AMENDATORY SECTION (Amending WSR 97-09-013, filed 4/7/97, effective 4/7/97)

WAC 296-307-40027 What emergency precautions are required when handling anhydrous ammonia? (1) You must train employees required to handle ammonia in the safe operating practices and the proper action to take in an emergency. Employees must be instructed to use the equipment listed in subsection (3) of this section in an emergency.

(2) If ammonia system leaks, the employees trained for and designated to act in emergencies must:

(a) See that anyone not required to deal with an emergency is evacuated from the contaminated area.

(b) ((~~Put on a suitable gas mask.~~)) Have two suitable gas masks in readily accessible locations. Full face masks with ammonia canisters as certified by NIOSH under 42 CFR Part 84, are suitable for emergency action for most leaks, particularly those that occur outdoors. For protection in concentrated ammonia atmospheres, self-contained breathing apparatus is required.

(c) Wear gauntlet type plastic or rubber gloves and wear plastic or rubber suits in heavily contaminated atmospheres.

(d) Shut off the appropriate valves.

(3) All storage systems must have on hand at least the following equipment for emergency and rescue purposes:

(a) *One full face gas mask with anhydrous ammonia refill canisters.

(b) **One pair of protective gloves.

(c) **One pair of protective boots.

(d) **One protective slicker and/or protective pants and jacket.

(e) Easily accessible shower and/or at least 50 gallons of clean water in an open top container.

(f) Tight-fitting vented goggles or one full face shield.

*((~~An ammonia canister is effective for short periods of time in light concentrations of ammonia vapor, generally fifteen minutes in concentrations of 3% and will not protect breathing in heavier concentrations.~~)) If ammonia vapors are detected when the mask is applied, ((~~the concentration is too high for safety~~)) leave the area immediately. The life of a canister in service is controlled by the percentage of vapors to which it is exposed. Canisters must not be opened until ready for use and should be discarded after use or as recommended by the canister manufacturer. Unopened canisters may be guaranteed for as long as three years and all should be dated when received. In addition, an independently supplied air mask of the type used by fire departments may be used for ((~~severe~~)) emergencies.

**Gloves, boots, slickers, jackets, and pants must be made

of rubber or other material impervious to ammonia.

(4) Where several persons are usually present, additional safety equipment may be necessary.

(5) Each tank motor vehicle transporting anhydrous ammonia, except farm applicator vehicles, must carry a container of at least five gallons of water and must have a full face gas mask, a pair of tight-fitting goggles or one full face shield. The driver must be instructed in their use and the proper action to take to provide for the driver's safety.

(6) If a leak occurs in transportation equipment and it is impractical to stop the leak, the driver should move the vehicle to an isolated location.

(7) If liquid ammonia contacts the skin or eyes, the affected area should be promptly and thoroughly flushed with water. Do not use neutralizing solutions or ointments on affected areas. A physician must treat all cases of eye exposure to liquid ammonia.

DIPPING AND COATING OPERATIONS (DIP TANKS)

NEW SECTION

WAC 296-307-445 Scope.

IMPORTANT:

A **dip tank** is a container holding a liquid other than plain water that is used for dipping or coating. An object may be completely or partially immersed (in a dip tank) or it may be suspended in a vapor coming from the tank.

Exemption: Dip tanks that use a molten material (molten metal, alloy, salt, etc.) are not covered by this chapter.

This chapter **applies** to:

✎ A dip tank that uses a liquid other than plain water, or the vapor of the liquid, to:

- Clean an object
- Coat an object
- Alter the surface of an object

OR

- Change the character of an object.

✎ Draining or drying an object that has been dipped or coated.

Examples of covered dipping and coating operations include, but are not limited to:

- Paint dipping
- Anodizing
- Pickling
- Quenching
- Tanning
- Degreasing
- Stripping
- Cleaning
- Dyeing.

Reference: You have to do a hazard assessment to identify hazards or potential hazards in your workplace and determine if PPE is necessary to protect your employees. See personal protective equipment (PPE), WAC 296-307-100 through 296-307-10025.

AMENDATORY SECTION (Amending WSR 97-09-013, filed 4/7/97, effective 4/7/97)

WAC 296-307-450 ((~~Other hazardous materials.~~)) General requirements.

Summary.

Your responsibility:

Safeguard employees working with dip tanks.

You must:

CONSTRUCTION

Construct safe dip tanks

WAC 296-307-45005

VENTILATION

Provide proper ventilation for the vapor area

WAC 296-307-45010

Take additional precautions if you recirculate ventilation system exhaust air into the workplace

WAC 296-307-45015

Take additional precautions when using an exhaust hood

WAC 296-307-45020

INSPECTION

Periodically inspect your dip tanks and associated equipment and correct any deficiencies

WAC 296-307-45025

FIRST AID

Make sure employees working near dip tanks know appropriate first-aid procedures

WAC 296-307-45030

CLEANING

Prepare dip tanks before cleaning

WAC 296-307-45035

WELDING

Protect employees during welding, burning or other work using open flames

WAC 296-307-45045

LIQUIDS HARMFUL TO SKIN

Provide additional protection for employees working near dip tanks that use liquid that may burn, irritate, or otherwise harm the skin

WAC 296-307-45050.

CONSTRUCTION

AMENDATORY SECTION (Amending WSR 97-09-013, filed 4/7/97, effective 4/7/97)

WAC 296-307-45005 ((~~What definitions apply to this section?~~)) Construct safe dip tanks. ((~~"Dip tank" means a tank, vat, or container of flammable or combustible liquid in which articles or materials are immersed for coating, finishing, treating, or similar processes.~~

~~"Vapor area" means any area containing dangerous quantities of flammable vapors in the vicinity of dip tanks, drainboards or other drying, conveying, or other equipment during operation or shutdown.~~))

You must:

✎ Make sure dip tanks, including any drain boards, are strong enough to support the expected load.

VENTILATION

NEW SECTION

WAC 296-307-45010 Provide proper ventilation for the vapor area.

You must:

✎ Make sure mechanical ventilation meets the requirements of one or more of the following standards:

– NFPA 34-1995, Standard for Dipping and Coating Processes Using Flammable or Combustible Liquids

– ACGIH's "Industrial Ventilation: A Manual of Recommended Practice" (22nd ed., 1995)

– ANSI Z9.1-1971, Practices for Ventilation and Operation of Open-Surface Tanks and ANSI Z9.2-1979, Fundamentals Governing the Design and Operation of Local Exhaust Systems.

Note: Some, or all, of the consensus standards (such as ANSI and NFPA) may have been revised. If you comply with a later version of a consensus standard, you will be considered to have complied with any previous version of the same consensus standard.

You must:

✎ Limit the vapor area to the smallest practical space by using mechanical ventilation

✎ Keep airborne concentration of any substance below twenty-five percent of its lower flammable limit (LFL)

✎ Make sure mechanical ventilation draws the flow of air into a hood or exhaust duct

✎ Have a separate exhaust system for each dip tank if the combination of substances being removed could cause a:

– Fire

– Explosion

OR

– Potentially hazardous chemical reaction.

Reference: You need to keep employee exposure within safe levels when the liquid in a dip tank creates an exposure hazard. See Air contaminants, WAC 296-62-075 through 296-62-07515.

Note: You may use a tank cover or material that floats on the surface of the liquid to replace or assist ventilation. The method or combination of methods you choose has to maintain the airborne concentration of the hazardous material and the employee's exposure within safe limits.

AMENDATORY SECTION (Amending WSR 97-09-013, filed 4/7/97, effective 4/7/97)

WAC 296-307-45015 ((~~How must liquids used in dip tanks be stored and handled?~~)) Take additional precautions if you recirculate ventilation system exhaust air into the workplace.

((~~The storage of flammable and combustible liquids in connection with dipping operations must meet the requirements of the National Fire Protection Association Standard for Drycleaning Plants, NFPA No. 32-1970; the National Fire Protection Association Standard for the Manufacture of Organic Coatings, NFPA No. 35-1970; the National Fire Protection Association Standard for Solvent Extraction Plants, NFPA No. 36-1967; and the National Fire Protection Association Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines, NFPA No. 37-1970.~~

~~Where portable containers are used to replenish flammable and combustible liquids, you must ensure that both the container and tank are positively grounded and electrically bonded to prevent static electric sparks.~~))

You must:

- Only recirculate air that contains no substance at a concentration that could pose a health or safety hazard to employees
- Make sure any exhaust system that recirculates air into the workplace:

  - Passes the air through a device that removes contaminants
  - Sounds an alarm and automatically shuts down the dip tank operation, if the vapor concentration of any substance in the exhaust air exceeds twenty-five percent of its LFL
  - Monitors the concentration of vapor from flammable or combustible liquids with approved equipment.

Note:
- The LFL concentration in the air must be determined after the air passes through the air-cleaning device and before the air reenters the workspace
- Most substances will pose a health hazard at a concentration far below twenty-five percent of its LFL.

NEW SECTION

WAC 296-307-45020 Take additional precautions when using an exhaust hood.

You must:

- Make sure each room with an exhaust hood has a source of outside air that:

  - Enters the room in a way that will not interfere with the function of the hood
  - Replaces at least ninety percent of the air taken in through the hood.

INSPECTION

AMENDATORY SECTION (Amending WSR 97-09-013, filed 4/7/97, effective 4/7/97)

WAC 296-307-45025 ((~~What requirements apply to flow coat applications?~~)) Periodically inspect your dip tanks and associated equipment and correct any deficiencies. ((~~(1) All dip tank requirements must apply to flow coat operations.~~

~~(2) All piping must be strongly erected and rigidly supported.~~

~~(3) Paint must be supplied by direct low-pressure pumping arranged to automatically shut down by an approved heat actuated device in the case of fire, or paint may be supplied by a gravity tank with a maximum capacity of 10 gallons.~~

~~(4) The sump area and any areas on which paint flows should be considered the area of dip tank.~~))

You must:

- Inspect or test your dip tanks and associated equipment periodically, including:
  - Covers
  - Overflow pipes
  - Bottom drains and valves
  - Electrical wiring, equipment, and grounding connections
  - Ventilating systems
  - Fire extinguishing equipment.
- Inspect the hoods and ductwork of the ventilation system for corrosion and damage and make sure the airflow is adequate:
  - At least quarterly during operation
  - Prior to operation after a prolonged shutdown.
- Promptly fix any deficiencies found.

Note:
- To assist you in tracking your inspections and actions taken from those inspections, you may want to keep a written record
- It is recommended that inspections be at least quarterly even if the system is not operating. Depending on the chemicals in use more frequent inspection may be required.

FIRST AID

NEW SECTION

WAC 296-307-45030 Make sure employees working near dip tanks know appropriate first-aid procedures.

You must:

- Make sure your employees know the appropriate first-aid procedures for the hazards of your dipping and coating operations.

Note:
- First-aid procedures are contained in the material safety data sheet (MSDS) for the chemicals used in the dip tank
- First-aid supplies appropriate for the hazards of the dipping or coating operation need to be located near the dip tank to be considered "readily available" as required by WAC 296-307-03920.

Reference: There are additional requirements that may include providing emergency washing facilities and employee training. See first aid, WAC 296-307-039, and employer chemical hazard communication, WAC 296-307-550.

CLEANING

NEW SECTION

WAC 296-307-45035 Prepare dip tanks before cleaning.

You must:

(1) Drain the contents of the tank and open any cleanout doors.

(2) Ventilate the tank to clear any accumulated hazardous vapors.

Reference: There may be requirements that apply before an employee enters a dip tank. See Permit-required confined spaces, WAC 296-62-141 and safety procedures, WAC 296-307-320.

WELDING

NEW SECTION

WAC 296-307-45045 Protect employees during welding, burning, or other work using open flames.

You must:

✎ Make sure the dip tank and the area around it are thoroughly cleaned of solvents and vapors before performing work involving:

- Welding
- Burning

OR

- Open flames.

Reference: There are additional requirements for this type of work. See Welding, cutting and brazing, WAC 296-307-475, and Respiratory protection, chapter 296-62 WAC, Part E.

LIQUIDS HARMFUL TO SKIN

NEW SECTION

WAC 296-307-45050 Protect employees that use liquids that may burn, irritate, or otherwise harm the skin.

You must:

(1) Make sure washing facilities, including hot water, are available for every ten employees that work with dip tank liquids.

(2) Satisfy medical requirements:

✎ Make sure an employee with any small skin abrasion, cut, rash, or open sore receives treatment by a properly designated person

✎ Make sure an employee with a sore, burn, or other skin lesion that needs medical treatment, has a physician's approval before they perform their regular work

✎ Make sure employees who work with chromic acid receive periodic examinations of their exposed body parts, especially their nostrils.

Note: ✎ Periodic means on a yearly basis unless otherwise indicated

✎ Any time chromic acid spills onto an employee's skin or their clothing is saturated, a physician should be responsible for evaluating and monitoring the area where chromic acid made contact with the skin.

You must:

(3) Provide lockers or other storage space to prevent contamination of street clothes.

Reference: You have to do a hazard assessment to identify hazards or potential hazards in your workplace and determine if PPE is necessary to protect your employees. See Personal protective equipment (PPE), WAC 296-307-100.

NEW SECTION

WAC 296-307-455 Additional requirements for dip tanks using flammable or combustible liquids.

Summary.

IMPORTANT:

This section applies to:

✎ Flammable and combustible liquids (flashpoint below 200☜F)

✎ Liquids that have a flashpoint of 200☜F (93.3☜C) or higher if you:

- Heat the liquid
- Dip a heated object in the tank

Your responsibility:

Safeguard employees working with dip tanks containing flammable or combustible liquids

You must:

CONSTRUCTION

Include additional safeguards when constructing dip tanks

WAC 296-307-45505

Provide overflow pipes

WAC 296-307-45510

Provide bottom drains

WAC 296-307-45515

FIRE PROTECTION

Provide fire protection in the vapor area

WAC 296-307-45520

Provide additional fire protection for large dip tanks

WAC 296-307-45525

ELECTRICAL WIRING AND EQUIPMENT AND SOURCES OF IGNITION

Prevent static electricity sparks or arcs when adding liquids to a dip tank

WAC 296-307-45535

Control ignition sources

WAC 296-307-45540

Provide safe wiring and electrical equipment where the liquid can drip or splash

WAC 296-307-45545

HOUSEKEEPING

Keep the area around dip tanks clear of combustible material and properly dispose of waste

WAC 296-307-45550

HEATING LIQUID

Make sure heating the liquid in your dip tanks does not

cause a fire

WAC 296-307-45555

HEAT DRYING

Make sure a heating system used for drying objects does not cause a fire

WAC 296-307-45560

CONVEYORS

Make sure the conveyor system for dip tanks is safe

WAC 296-307-45565

CONSTRUCTION

NEW SECTION

WAC 296-307-45505 Include additional safeguards when constructing dip tanks.

You must:

(1) Make sure the dip tank, drain boards (if provided), and supports are made of noncombustible material.

(2) Make sure piping connections on drains and overflow pipes allow easy access to the inside of the pipe for inspection and cleaning.

NEW SECTION

WAC 296-307-45510 Provide overflow pipes.

You must:

✎ Provide an overflow pipe on dip tanks that:

- Hold more than one hundred fifty gallons of liquid

OR

- Have more than ten square feet of liquid surface area.

✎ Make sure the overflow pipe is:

- Properly trapped
- Able to prevent the dip tank from overflowing
- Three inches or more (7.6 cm) in diameter
- Discharged to a safe location.

Note: Discharged to a safe location could be a:

✎ Safe location outside the building

OR

✎ Closed, properly vented salvage tank or tanks that can hold more than the dip tank.

You must:

✎ Make sure the bottom of the overflow pipe is at least six inches (15.2 cm) below the top of the tank.

Note: The overflow pipe should be large enough to remove water applied to the liquid surface of the dip tank from automatic sprinklers or other sources in the event of fire. Smaller dip tanks should be equipped with overflow pipes, if practical.

NEW SECTION

WAC 296-307-45515 Provide bottom drains.

Exemption: A bottom drain is not required if:
– The viscosity of the liquid makes it impractical to empty the tank by gravity or pumping
OR
– The dip tank has an automatic closing cover that meets the requirements of WAC 296-307-45530.

You must:

✎ Provide a bottom drain on all dip tanks that hold more than five hundred gallons of liquid

✎ Make sure the bottom drain:

– Is properly trapped

– Will empty the dip tank during a fire

– Has pipes large enough to empty the tank within five minutes

– Uses automatic pumps if gravity draining is not practical

– Is capable of both manual and automatic operation

– Discharges to a safe location.

Note: Discharges to a safe location could be a:
✎ Safe location outside the building
OR
✎ Closed, properly vented salvage tank or tanks that can hold more than the dip tank.

You must:

✎ Make sure manual operation of the bottom drain is performed from a safe and easily accessible location.

FIRE PROTECTION

NEW SECTION

WAC 296-307-45520 Provide fire protection in the vapor area.

You must:

✎ Provide a manual fire extinguisher near the tank that is suitable for putting out flammable and combustible liquid fires.

NEW SECTION

WAC 296-307-45525 Provide additional fire protection for large dip tanks.

You must:

✎ Provide at least one automatic fire extinguishing system or an automatic dip tank cover if the tank:

– Holds one hundred fifty gallons or more of liquid

OR

– Has four square feet or more of liquid surface area.

✎ Make sure automatic fire extinguishing systems or automatic dip tank covers meet the requirements of Table 1.

Exemption: An automatic fire extinguishing system or an automatic dip tank cover is **not** required for a hardening or tempering tank that:

- Holds less than five hundred gallons

OR

- Has less than twenty-five square feet of liquid surface area.

Table 1: Automatic Fire Protection System Requirements

If you provide:	Then you must:
An automatic fire extinguishing system	✎ Use extinguishing materials suitable for a fire fueled by the liquid in the tank ✎ Make sure the system protects the: – Tanks – Drain boards – Stock over drain boards.
A dip tank cover	✎ Make sure the cover is: – Closed by approved automatic devices in the event of fire – Able to be manually activated – Kept closed when the tank is not being used – Made of noncombustible material or metal-clad material with locked metal joints.

ELECTRICAL WIRING AND EQUIPMENT AND SOURCES OF IGNITION

NEW SECTION

WAC 296-307-45535 Prevent static electricity sparks or arcs when adding liquids to a dip tank.

You must:

✎ Make sure any portable container used to add liquid to the tank is:

- Electrically bonded to the dip tank
- Positively grounded.

NEW SECTION

WAC 296-307-45540 Control ignition sources.

You must:

(1) Make sure the vapor areas and adjacent areas do not have any:

✎ Open flames

✎ Spark producing devices

✎ Heated surfaces hot enough to ignite vapors.

(2) Use explosion-proof wiring and equipment in the vapor area.

Reference: Electrical wiring and equipment has to meet the requirements of the applicable hazardous (classified) location. See Hazardous (classified) locations, WAC 296-307-37209.

You must:

(3) Prohibit smoking in any vapor area:

✎ Post an easily seen "NO SMOKING" sign near each dip tank.

NEW SECTION

WAC 296-307-45545 Provide safe electrical wiring and equipment where the liquid can drip or splash.

You must:

✎ Make sure all electrical wiring and equipment in the vapor area is approved for areas that have:

- Deposits of easily ignited residue
- Explosive vapor.

Exemption: This does not apply to wiring that is:
- In rigid conduit, threaded boxes or fittings
- Has no taps, splices, or terminal connections.

HOUSEKEEPING

NEW SECTION

WAC 296-307-45550 Keep the area around dip tanks clear of combustible material and properly dispose of waste.

You must:

(1) Make sure the area surrounding dip tanks is:

- Completely free of combustible debris
- As free of combustible stock as possible.

(2) Provide approved metal waste cans that are:

- Used for immediate disposal of rags and other material contaminated with liquids from dipping or coating operations
- Emptied and the contents properly disposed of at the end of each shift.

HEATING LIQUID

NEW SECTION

WAC 296-307-45555 Make sure heating the liquid in your dip tanks does not cause a fire.

You must:

✎ Keep the temperature of the liquid in the dip tank:

- Below the liquid's boiling point
- At least 100°F below the liquid's autoignition temperature.

HEAT DRYING

NEW SECTION

WAC 296-307-45560 Make sure a heating system used for drying objects does not cause a fire.

You must:

✎ Make sure the heating system used in a drying operation that could cause ignition:

– Has adequate mechanical ventilation that operates before and during the drying operation

– Shuts down automatically if a ventilating fan fails to maintain adequate ventilation

– Is installed as required by NFPA 86-1999, Standard for Ovens and Furnaces.

Note: Some, or all, of the consensus standards (such as ANSI and NFPA) may have been revised. If you comply with a later version of a consensus standard, you will be considered to have complied with any previous version of the same consensus standard.

CONVEYORS

NEW SECTION

WAC 296-307-45565 Make sure conveyor systems are safe.

You must:

✎ Make sure the conveyor system shuts down automatically if:

– The ventilation system fails to maintain adequate ventilation

OR

– There is a fire.

NEW SECTION

WAC 296-307-460 Additional requirements for dip tanks used for specific processes.

Summary.

Your responsibility:

Safeguard employees working with dip tanks used for specific processes

You must:

HARDENING OR TEMPERING

Meet specific requirements if you use a hardening or tempering tank

WAC 296-307-46005

VAPOR DEGREASING

Provide additional safeguards for vapor degreasing tanks

WAC 296-307-46025

SPRAY CLEANING OR DEGREASING

Control liquid spray over an open surface cleaning or degreasing tank

WAC 296-307-46030.

HARDENING OR TEMPERING

NEW SECTION

WAC 296-307-46005 Meet specific requirements if you use a hardening or tempering tank.

You must:

(1) Provide an automatic fire extinguishing system or an automatic dip tank cover for any hardening and tempering tank that uses flammable or combustible liquids and:

- Holds five hundred gallons (1893 L) or more of liquid

OR

- Has twenty-five square feet (2.37 m^2) or more of liquid surface area.

(2) Prevent fires.

✎ Make sure hardening and tempering tanks are:

- **Not** located on or near combustible flooring
- Located as far away as practical from furnaces
- Equipped with noncombustible hoods and vents (or equally effective devices) for venting to the outside.

✎ Treat vent ducts as flues and keep them away from combustible material, particularly roofs.

(3) Make sure air under pressure is not used to:

✎ Fill the tank

OR

✎ Agitate the liquid in the tank.

(4) Equip each tank with an alarm that will sound when the temperature is within 50☜F (10☜C) of the liquid's flashpoint (alarm set point).

(5) Make sure a limit switch shuts down conveyors supplying work to the tank when the temperature reaches the alarm setpoint, if operationally practical.

(6) Have a circulating cooling system if the temperature of the liquid can exceed the alarm set point.

Note: The bottom drain of the tank may be combined with the oil circulating system if the requirements for bottom drains in WAC 296-307-45515 are satisfied.

VAPOR DEGREASING

NEW SECTION

WAC 296-307-46025 Provide additional safeguards for vapor degreasing tanks.

You must:

(1) Make sure, if the tank has a condenser or a vapor-level thermostat, that it keeps the vapor level at least:

✎ Thirty-six inches (91 cm) below the top of the tank if the width of the tank is seventy-two inches or more

OR

✎ One-half the tank width below the top of the tank if the tank is less than seventy-two inches wide.

(2) Make sure, if you use gas as a fuel to heat the tank liquid, that the combustion chamber is airtight (except for the flue opening) to prevent solvent vapors from entering the air-fuel mixture.

(3) Make sure the exhaust flue:

✎ Is made of corrosion-resistant material

✎ Extends to the outside

✎ Has a draft diverter if mechanical exhaust is used.

(4) Take special precautions to keep solvent vapors from mixing with the combustion air of the heater if chlorinated or fluorinated hydrocarbon solvents (for example, trichloroethylene or freon) are used in the dip tank.

(5) Keep the temperature of the heating element low enough to keep a solvent or mixture from:

✎ Decomposing

OR

✎ Generating excessive vapor.

SPRAY CLEANING OR DEGREASING

NEW SECTION

WAC 296-307-46030 Control liquid spray over an open surface cleaning or degreasing tank.

You must:

✎ Control the spray to the greatest extent feasible by:

- Enclosing the spraying operation as completely as possible
- Using mechanical ventilation to provide enough inward air velocity to prevent the spray from leaving the vapor area.

Note: Mechanical baffles may be used to help prevent the discharge of spray.

Reference: Spray painting operations are covered in Spray-finishing operations, WAC 296-62-11019.

NEW SECTION

WAC 296-307-465 Definitions.

ACGIH: American Conference of Governmental Industrial Hygienists.

Adjacent area: Any area within twenty feet (6.1 m) of a vapor area that is not separated from the vapor area by tight partitions.

ANSI: American National Standards Institute.

Approved: Approved or listed by a nationally recognized testing laboratory. Refer to federal regulation 29 CFR 1910.7, for definition of nationally recognized testing laboratory.

Autoignition temperature: The minimum temperature required to cause self-sustained combustion without any other source of heat.

Combustible liquid: A liquid having a flashpoint of at least 100°F (37.8°C) and below 200°F (93.3°C). Mixtures with at least ninety-nine percent of their components having flashpoints of 200°F (93.3°C) or higher are not considered combustible liquids.

Detearing: A process for removing excess wet coating material from the bottom edge of a dipped or coated object or material by passing it through an electrostatic field.

Dip tank: A container holding a liquid other than plain water that is used for dipping or coating. An object may be immersed (or partially immersed) in a dip tank or it may be suspended in a vapor coming from the tank.

Flammable liquid: Any liquid having a flashpoint below 100°F (37.8°C), except any mixture having components with flashpoints of 100°F (37.8°C) or higher, the total of which make up ninety-nine percent or more of the total volume of the mixture.

Flashpoint: The minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested by any of the measurement methods described in the definition of flashpoint in WAC 296-307-55060.

Lower flammable limit: The lowest concentration of a material that will propagate a flame. The LFL is usually expressed as a percent by volume of the material in air (or other oxidant).

NFPA: National Fire Protection Association.

Vapor area: Any area in the vicinity of dip tanks, their drain boards or associated drying, conveying, or other equipment where the vapor concentration could exceed twenty-five percent of the lower flammable limit (LFL) for the liquid in the tank.

You: Means the employer.

AMENDATORY SECTION (Amending WSR 01-17-033, filed 8/8/01, effective 9/1/01)

WAC 296-307-55030 Inform and train your employees about hazardous chemicals in your workplace.

Note: The employer chemical hazard communication information and training requirements also apply to pesticides. Employers who have employees who are exposed to pesticides must be in compliance with this rule and the worker protection standards, WAC 296-307-12040.

You must:

✎ Provide employees with effective information on hazardous chemicals in their work area at the time of their initial job assignment. Whenever a new physical or health hazard related to chemical exposure is introduced into their employees' work areas, information must be provided.

– Inform employees of:

② The requirements of this rule.

② Any operations in their work area where hazardous chemicals are present.

② The location and availability of your written Chemical Hazard Communication Program, including the list(s) of hazardous chemicals and material safety data sheets (MSDSs) required by this rule.

✎ Provide employees with effective training about hazardous chemicals in their work area at the time of their initial job assignment. Whenever a new physical or health hazard related to chemical exposure is introduced, the employees must be trained.

✎ Make sure that employee training includes:

– Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area. Examples of these methods and observations may include:

② Monitoring conducted by you

② Continuous monitoring devices

② Visual appearance or odor of hazardous chemicals when being released

((~~②~~)) – Physical and health hazards of the chemicals in the work area, including the likely physical symptoms or effects of overexposure

((~~②~~)) – Steps employees can take to protect themselves from the chemical hazards in your workplace, including specific procedures implemented by you to protect employees from exposure to hazardous chemicals. Specific procedures may include:

✂ Appropriate work practices

✂ Engineering controls

✂ Emergency procedures

✂ Personal protective equipment to be used

((~~✂~~)) – Details of the Chemical Hazard Communication Program developed by you, including an explanation of the labeling system and the MSDS, and how employees can obtain and

use the appropriate hazard information.

✎ Tailor information and training to the types of hazards to which employees will be exposed. The information and training may be designed to cover categories of hazards, such as flammability or cancer-causing potential, or it may address specific chemicals. Chemical-specific information must always be available through labels and MSDSs.

✎ Make reasonable efforts to post notices in your employees' native languages (as provided by the department) if those employees have trouble communicating in English.

Note:

✎ Interactive computer-based training or training videos can be used provided they are effective.

✎ Your MSDSs may not have WISHA permissible exposure limits (PELs) listed. In some cases, WISHA PELs are stricter than the OSHA PELs and other exposure limits listed on the MSDSs you receive. If this is the case, you must refer to the WISHA PEL table, WAC 296-62-075, for the appropriate exposure limits to be covered during training.

MATERIAL SAFETY DATA SHEETS AND LABEL PREPARATION

NEW SECTION

WAC 296-307-560 Scope. This chapter sets minimum requirements for content and distribution of material safety data sheets (MSDSs) and labels for hazardous chemicals.

✎ This chapter applies when you do **one or more** of the following:

– Import, produce, or repackage chemicals, including manufactured items (such as bricks, welding rods, and sheet metal) that are not exempt as articles

– Sell or distribute hazardous chemicals to manufacturers, distributors or employers

– Choose not to rely on material safety data sheets (MSDSs) provided by the importer, manufacturer or distributor.

Note: ✎ You are not required to evaluate chemicals or create MSDSs for chemicals you did not produce or import. If you decide to evaluate chemicals or create MSDSs, then the requirements of this chapter will apply to you.

✎ Use Table 2 to determine which sections in this chapter apply to your workplace.

Exemptions: ✎ All of the following are **always** exempt from this chapter:

– Ionizing and nonionizing radiation

– Biological hazards

– Tobacco and tobacco products

✎ The chemicals and items listed in Table 1 are exempt from this chapter **under the conditions specified.**

Table 1
Conditional Exemptions from this chapter

This chapter does NOT apply to	**When**
✎ Alcoholic beverages **OR** ✎ Foods	✎ Sold, used, or prepared in a retail establishment (such as a grocery store, restaurant, bar, or tavern)
✎ An article (manufactured item)	✎ It is not a fluid or particle **AND** ✎ It is formed to a specific shape or design during manufacture for a particular end use function[1] **AND**

	✎ It releases only trace amounts of a hazardous chemical during normal use **AND** does not pose a physical or health risk to employees
✎ Consumer products – Produced or distributed for sale meeting the definition of "consumer products" in the Consumer Product Safety Act (see U.S. Code, Title 15, Chapter 47, section 2052[2]) **OR** ✎ Hazardous household products – Meeting the definition of "hazardous substances" in the Federal Hazardous Substance Act (see U.S. Code, Title 15, Chapter 30, section 1261[2])	✎ Both criteria apply: – They are used in the workplace for the same purpose as intended by the manufacturer or importer – The duration and frequency of an employee's exposure is no more than the range of exposures that consumers might reasonably experience
✎ Cosmetics	✎ Packaged and sold in retail establishments
✎ Drugs – Meeting the definition for "drugs" in the Federal Food, Drug, and Cosmetic Act (see U.S. Code, Title 21, Chapter 9, Subchapter II, section 321[2])	✎ In solid, final form (for example, tablets, or pills) for direct administration to the patient **OR** ✎ Packaged and sold in retail establishments (for example, over-the-counter drugs) **OR** ✎ Intended for employee consumption while in the workplace (for example, first-aid supplies)
✎ Hazardous solid wastes – Meeting the definition of "hazardous wastes" in the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (see U.S. Code, Title 42, Chapter 82, Subchapter I, section 6903[2])	✎ Subject to the United States Environmental Protection Agency (EPA) regulations[3]
✎ Hazardous substances – Released into the environment, meeting the definition of "hazardous substances" in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (see U.S. Code, Title 42, Chapter 103, Subchapter I, section 9601[2])	✎ They are the focus of remedial or removal action being conducted under CERCLA in accordance with EPA regulations (Title 40 of the Code of Federal Regulations (CFR)[3])
✎ Hazardous wastes – Meeting the definition of "dangerous wastes" in the Hazardous Waste Management Act (see chapter 70.105 RCW[4])	✎ Subject to department of ecology regulations, chapter 173-303 WAC[5], that address the accumulation, handling and management of hazardous waste, and describe all of the following: – Safety – Labeling – Personnel training – And other related requirements
✎ Solid wood **OR** ✎ Wood products (for example, lumber, and paper)	✎ All of the following apply: – The material is not treated with hazardous chemicals – The only hazard is potential flammability or combustibility

	– The product is not expected to be processed (for example, by sanding or sawing)

[1]End use is dependent in whole, or in part, upon maintaining the item's original shape or design. If the item will be significantly altered from its original form, it can no longer be considered a manufactured item.
[2]This federal act is included in the United States Code. See http://www.access.gpo.gov/uscode/uscmain.html.
[3]EPA regulations are included in the Code of Federal Regulations (CFR). See http://www.epa.gov.
[4]This state act is included in the Revised Code of Washington (RCW). The RCW compiles all permanent laws of the state. See http://www.leg.wa.gov/wsladm/default.htm.
[5]See http://www.ecy.wa.gov.

Use Table 2 to find out which sections of this chapter apply to you. For example, if you import **AND** sell hazardous chemicals **ALL** sections apply. WAC 296-307-56050 applies to all employers covered by the scope of this chapter.

Table 2
Section Application

If you	**Then the sections marked with an "X" apply**			
	56010 - 56015	**56025**	**56030 - 56035**	**56045**
✎ Import or produce chemicals	X	X		
✎ Sell or distribute hazardous chemicals to – Manufacturers **OR** – Distributors **OR** – Employers (includes retail or wholesale transactions)			X	X
✎ Choose to **NOT** rely on MSDSs provided by the importer, manufacturer or distributor	X	X		

NEW SECTION

WAC 296-307-56005 Hazard evaluation.

Your responsibility:

To make sure the hazardous chemicals are identified.

You must:

Conduct complete hazard evaluations *WAC 296-307-56010*

Provide access to hazard evaluation procedures *WAC 296-307-56015.*

NEW SECTION

WAC 296-307-56010 Conduct complete hazard evaluations.

IMPORTANT:

✎ Hazard evaluation is a process where hazards of chemicals are identified by reviewing available research or testing information. You are not required to perform your own laboratory research or testing to meet the requirements of this

section

– Information from hazard evaluations is used to complete material safety data sheets (MSDSs) and labels

– MSDSs from your suppliers may be used to complete the hazard evaluation for chemicals you produce

– MSDSs and labels are **NOT** required for chemicals that are determined to be nonhazardous

✎ Importers and manufacturers are required to develop MSDSs and labels. If you decide to develop your own MSDSs and labels, then this chapter also applies to you.

You must:

(1) Describe in writing your procedures for conducting hazard evaluations.

(2) Conduct a complete hazard evaluation for **ALL** chemicals you produce or import to determine if they are hazardous chemicals.

✎ Identify and consider available scientific evidence of health and physical hazards

✎ Evidence that meets the criteria in Table 3 must be used to establish a hazard

✎ Chemicals identified in a Table 4 source must be regarded as hazardous

✎ The scope of health hazards considered must include the categories in Tables 5 and 6

✎ If the chemical is a mixture, follow the additional criteria in Table 7

✎ If you find evidence that meets the criteria in Table 3, use it in your hazard evaluation.

Table 3
Criteria for Hazard Evidence

Hazard	Criteria
✎ Health hazard	✎ Where available, use human case reports of health effects **AND** ✎ One or more studies that – Are based on human populations, if available, and animal populations[1,2] **AND** – Report statistically significant conclusions of a hazardous effect or health hazard (as defined in this rule) **AND** – Have been conducted following established scientific principles
✎ Physical hazard	✎ Valid evidence that shows a chemical is any one of the following[3]: – A combustible liquid

	– A compressed gas – Explosive – Flammable – An organic peroxide – An oxidizer – Pyrophoric – Unstable (reactive) – Water-reactive

[1]If human data is not available, use results of tests done on animals and other available studies to predict health effects on employees (for example, effects resulting from short and long-term exposures to chemicals).
[2]In vitro studies alone do not generally form the basis of a finding of hazard.
[3]These terms are defined in WAC 296-307-56050.

Chemicals identified in the sources listed in Table 4 must be assumed to be hazardous (including carcinogens and potential carcinogens).

Table 4
Information Sources Identifying Hazardous Chemicals

- Sources that address a broad range of hazard categories:
  - Chapter 296-62 WAC, General Occupational Health Standards, WISHA
  - 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA)
  - *Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment*, American Conference of Governmental Industrial Hygienists (ACGIH) (latest edition).
- Sources that identify carcinogens or potential carcinogens:
  - Chapter 296-62 WAC, General Occupational Health Standards, WISHA
  - 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA)
  - National Toxicology Program (NTP), Annual Report on Carcinogens (latest edition)
  - International Agency for Research on Cancer (IARC) Monographs (latest editions).

Note: The *Registry of Toxic Effects of Chemical Substances* is published by the National Institute for Occupational Safety and Health (NIOSH) and identifies chemicals found to be potential carcinogens by the NTP and IARC.

Chemicals meeting Table 5 definitions, along with the criteria for established evidence in Table 3, must be regarded as hazardous.

Table 5 is NOT intended to present all hazard categories or test methods. Available scientific data involving other test methods and animal species must also be evaluated to determine a chemical's hazards.

Table 5 Standard Health Hazard Categories	
A chemical is considered to be	**If**
✎ A carcinogen	✎ The International Agency for Research on Cancer (IARC) considers it to be a carcinogen or potential carcinogen **OR** ✎ The National Toxicity Program (NTP) (latest edition) lists it as a carcinogen or potential carcinogen **OR** ✎ It is regulated by WISHA or OSHA as a carcinogen
✎ Corrosive	✎ It causes visible destruction of, or irreversible alterations in, living tissue (not inanimate surfaces) by chemical action at the site of contact Example: – A chemical is corrosive if tested on the intact skin of albino rabbits by a method described by the U.S. Department of Transportation (in Appendix A to 49 CFR Part 173) and it destroys or changes (irreversibly) the structure of the tissue at the contact site after a four-hour exposure period
✎ Toxic	✎ It has a median lethal dose (LD50) greater than 50 milligrams per kilogram, but no more than 500 milligrams per kilogram of body weight, when administered orally to albino rats weighing between 200 - 300 grams each **OR** ✎ It has a median lethal dose (LD50) greater than 200 milligrams per kilogram, but not more than 1,000 milligrams per kilogram, of body weight when administered by continuous contact for twenty-four hours (or less if death occurs within twenty-four hours) with the bare skin of albino rabbits weighing between 2 - 3 kilograms each **OR** ✎ It has a median lethal concentration (LC50), in air: – Greater than 200 parts per million, but not more than 2,000 parts per million (by volume of gas or vapor) **OR** – Greater than 2 milligrams per liter, but not more than 20 milligrams per liter, of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats, weighing between 200 - 300 grams each

✎ Highly toxic	✎ It has a median lethal dose (LD50) of 50 milligrams, or less, per kilogram of body weight when administered orally to albino rats weighing between 200 - 300 grams each **OR** ✎ It has a median lethal dose (LD50) of 200 milligrams, or less, per kilogram of body weight when administered by continuous contact for twenty-four hours (or less if death occurs within twenty-four hours) with the bare skin of albino rabbits weighing between 2 - 3 kilograms each **OR** ✎ It has a median lethal concentration of (LC50), in air, of: – 200 parts per million (by volume), or less, of gas or vapor **OR** – 2 milligrams per liter, or less, of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 - 300 grams each
✎ An irritant	✎ It is **NOT** corrosive, but causes a reversible inflammatory effect on living tissue by chemical action at the contact site Examples: – The chemical is a skin irritant when tested on the intact skin of albino rabbits (by the methods of 16 CFR 1500.41) for four hours exposure (or by other appropriate techniques), and the exposure results in an empirical score of five or more – A chemical is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques
✎ A sensitizer	✎ It causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure

Categories provided in Table 6 illustrate the broad range of target organ effects that must be considered when conducting hazard evaluations. Chemicals meeting Table 6 definitions, along with the criteria for established evidence in Table 3, must be regarded as hazardous.

Examples provided in Table 6 are **NOT** intended to be a complete list.

Table 6
Examples of Target Organ Effect Categories Category

Category	Definition	Examples of Signs and Symptoms	Examples of Chemicals
Hepatotoxins	Cause liver damage	✎ Jaundice ✎ Liver enlargement	✎ Carbon tetrachloride ✎ Nitrosamines
Nephrotoxins	Cause kidney damage	✎ Edema ✎ Proteinuria	✎ Halogenated hydrocarbons ✎ Cadmium
Neurotoxins	Cause primary toxic effects on the nervous system	✎ Narcosis ✎ Behavioral changes ✎ Decrease in motor functions	✎ Mercury ✎ Carbon disulfide ✎ Lead
Chemicals that act on the ✎ Blood **OR** ✎ Hematopoietic (blood forming) system	✎ Decrease hemoglobin function **OR** ✎ Deprive the body tissues of oxygen	✎ Cyanosis ✎ Loss of consciousness	✎ Carbon monoxide ✎ Cyanides ✎ Benzene
Chemicals that damage the lungs	✎ Irritate lungs **OR** ✎ Damage pulmonary tissue	✎ Cough ✎ Tightness in chest ✎ Shortness of breath	✎ Silica ✎ Asbestos
Reproductive toxins	Affect reproductive capabilities, including: ✎ Chromosomal damage (mutation) ✎ Effects on fetuses (teratogenesis)	✎ Birth defects ✎ Sterility	✎ Lead ✎ 1,2-Dibromo-3-chloropropane (DBCP) ✎ Nitrous oxide
Cutaneous (skin) hazards	Affect the dermal layer of the body	✎ Defatting of the skin ✎ Rashes ✎ Irritation	✎ Ketones ✎ Chlorinated compounds
Eye hazards	Affect the eye or ability to see	✎ Conjunctivitis ✎ Corneal damage	✎ Organic solvents ✎ Acids

Table 7
Criteria for Evaluating Chemical Mixtures

If a mixture	Then
✎ Has been thoroughly tested as a whole for a physical or health hazard	✎ You must use those results
✎ Has **NOT** been tested as a whole for a health hazard	✎ You must: – Evaluate **EACH** ingredient in the mixture to determine the hazards – Consider the mixture to have the same hazard as each ingredient determined to be hazardous
✎ Has **NOT** been tested as a whole for physical hazards	✎ You must: ✎ Use any scientifically valid data available to evaluate the potential physical hazards of the mixture

NEW SECTION

WAC 296-307-56015 Provide access to hazard evaluation procedures.

You must:

✎ Provide access to your written hazard evaluation procedures when requested by any of the following:

- Employees
- Designated representatives of employees
- Representatives of the department of labor and industries
- Representatives of the National Institute for Occupational Safety and Health (NIOSH).

NEW SECTION

WAC 296-307-56020 Material safety data sheets.

Your responsibility:

To provide complete and accurate material safety data sheets (MSDSs).

You must:

Develop or obtain MSDSs
WAC 296-307-56025
Provide MSDSs
WAC 296-307-56030
Follow-up if an MSDS is not provided
WAC 296-307-56035.

NEW SECTION

WAC 296-307-56025 Develop or obtain material safety data sheets (MSDSs).

You must:

✎ Develop or obtain a complete and accurate material safety data sheet (MSDS) for each hazardous chemical or mixture according to **ALL** of the following:

- **ALL** information in Table 8 must be completed. If there is no relevant information for a required item, this must be noted. Blank spaces are not permitted.

Note: ✎ No specific format is required for MSDSs; however, an example format (OSHA form 174) can be found online at: http://www.osha.gov
✎ One MSDS can be developed for a group of complex mixtures (for example, jet fuels or crude oil) **IF** the health and physical hazards of the mixtures are similar (the amounts of chemicals in the mixture may vary).

- Content of MSDSs must accurately represent the available scientific evidence.

Note: You may report results of scientifically valid studies that tend to refute findings of hazards.

- MSDSs must be in English.

Note: You may develop copies of MSDSs in other languages.

You must:

- Revise an MSDS when you become aware of new and significant information regarding the hazards of a chemical, or how to protect against the hazards
  - Within three months after you first become aware of the information

  OR
  - Before the chemical is reintroduced into the workplace if the chemical is no longer being used, produced or imported.

Table 8 **Information Required on MSDSs**
✎ The chemical's identity as it appears on the label
✎ The date the MSDS was prepared or updated
✎ A contact for additional information about the hazardous chemical and appropriate emergency procedures Include all of the following: – Name – Address – Telephone number of the responsible party preparing or distributing the MSDS
✎ The chemical's hazardous ingredients[1] as determined by your hazard evaluation – For a **single substance chemical,** include the chemical and common name(s) of the substance – For **mixtures** tested as a whole ✂ Include the common name(s) of the mixture **AND** ✂ List the chemical and common name(s) of ingredients that contribute to the known hazards – For **mixtures NOT** tested as a whole, list the chemical and common name(s) of hazardous ingredients ✂ That make up 1% or more of the mixture, by weight or volume, including carcinogens (if 0.1% concentration or more, by weight or volume) – If ingredients are less than the above concentrations but may present a health risk to employees (for example, allergic reaction or exposure could exceed the permissible exposure limits, or PEL) they must be listed here
✎ Exposure limits for airborne concentrations. Include **ALL** of the following, when they exist: – WISHA or OSHA PELs[2] ✂ The 8-hour time weighted average (TWA) ✂ The short-term exposure limit (STEL), if available ✂ Ceiling values, if available – Threshold limit values (TLVs) including 8-hour TWAs, STELs, and ceiling values – Other exposure limits used or recommended by the employer preparing the MSDS
✎ Physical and chemical characteristics

– For example, boiling point, vapor pressure, and odor

✎ Fire, explosion data, and related information

– For example, flashpoint, flammable and explosion limits, extinguishing media, and unusual fire or explosion hazards

✎ Physical hazards of the chemical including reactivity information

– For example, incompatibilities, decomposition products, by-products, and conditions to avoid

✎ Health hazard information including **ALL** of the following:

– Primary routes of exposure

✎ For example, inhalation, ingestion, and skin absorption or other contact[3]

– Health effects (or hazards) associated with:

✂ Short-term exposure[4]

AND

✂ Long-term exposure[4]

– Whether the chemical is listed or described as a carcinogen or potential carcinogen in the latest editions of each of the following:

✂ The National Toxicology Program (NTP) Annual Report on Carcinogens

OR

✂ The International Agency for Research on Cancer (IARC) Monographs as a potential carcinogen

OR

✂ WISHA or OSHA rules

– Signs and symptoms of exposure[5]

– Medical conditions generally recognized as being aggravated by exposure

✎ Emergency and first-aid procedures

✎ Generally applicable precautions for safe handling and use known to the employer preparing the MSDS

– For example, appropriate procedures for clean-up of spills and leaks, waste disposal method, precautions during handling and storing

✎ Generally applicable and appropriate control measures known to the employer preparing the MSDS, including **ALL** of the following:

– Engineering controls (for example, general or local exhaust ventilation)

– Work practices

– Personal protective equipment (PPE)

– Personal hygiene practices

– Protective measures during repair and maintenance of contaminated equipment

[1]The identities of some chemicals may be protected as trade secret information (see chapter 296-62 WAC, Part B-1, Trade secrets).

[2]WISHA PEL categories are defined, and values are provided, in chapter 296-62 WAC, Part H.

[3]A "skin notation" listed with either an ACGIH TLV or WISHA/OSHA PEL indicates that skin absorption is a primary route of exposure.

[4]Examples of:

✎ Short-term health effects (or hazards) include eye irritation, skin damage caused by contact with corrosives, narcosis, sensitization,

and lethal dose.
✎ Long-term health effects (or hazards) include cancer, liver degeneration, and silicosis.
[5]Signs and symptoms of exposure to hazardous substances include those that:
✎ Can be measured such as decreased pulmonary function
AND
✎ Are subjective such as feeling short of breath.

NEW SECTION

WAC 296-307-56030 Provide MSDSs for products shipped, transferred or sold over-the-counter.

You must:

✎ Provide the correct MSDS to manufacturers, distributors and employers:

– With the initial shipment or transfer of the product

AND

– With the first shipment or transfer after an MSDS is updated

AND

– Whenever one is requested.

Note: ✎ MSDSs may be provided separately from containers as long as they are provided before or at the same time as the containers. For example, you may fax, or e-mail the MSDS
✎ You are **NOT** required to provide MSDSs to retailers who inform you they
– Do not sell the product to commercial accounts
AND
– Do not open the sealed product containers for use in their workplace.

You must:

✎ Follow the requirements in Table 9 for chemicals sold over-the-counter.

Table 9
Requirements for Chemicals Sold Over-the-Counter (NOT Shipped)

If you are a	Then
✎ Retail distributor **WITH** commercial accounts	✎ Provide an MSDS to employers with commercial accounts when requested **AND** ✎ Post a sign, or otherwise inform employers, that MSDSs are available
✎ Retail distributor **WITHOUT** commercial accounts	✎ Provide the employer, when requested, with **ALL** of the following: – Name – Address – Telephone number of the chemical manufacturer, importer, or distributor who can provide an MSDS
✎ Wholesale distributor selling products over-the-counter to employers	✎ Provide an MSDS to employers with commercial accounts when requested **AND** ✎ Post a sign, or otherwise inform employers, that MSDSs are available

NEW SECTION

WAC 296-307-56035 Follow-up if an MSDS is not provided.

You must:

✎ Obtain an MSDS from the chemical manufacturer, distributor or importer as soon as possible, if an MSDS is not provided for a shipment labeled as a hazardous chemical.

NEW SECTION

WAC 296-307-56040 Labeling.

Your responsibility:

To provide employers with containers of hazardous chemicals that are properly labeled.

NEW SECTION

WAC 296-307-56045 Label containers of hazardous chemicals.

Exemption: Containers are exempt from this section if **ALL** hazardous contents are listed in Table 11.

You must:

✎ Make sure every container of hazardous chemicals leaving the workplace is properly labeled. This includes **ALL** of the following:

– The identity of the hazardous chemical (the chemical or common name) that matches the identity used on the MSDS

– An appropriate hazard warning

– The name and address of the chemical manufacturer, importer, or other responsible party

– Make sure labeling does not conflict with the requirements of:

✎ The Hazardous Materials Transportation Act (49 U.S.C. 1801 et seq.)

AND

✎ Regulations issued under the act by the U.S. Department of Transportation (Title 49 of the Code of Federal Regulations, Parts 171 through 180). See http://www.dot.gov

– Revise labels within three months of becoming aware of new and significant information about chemical hazards

– Provide revised labels on containers beginning with the first shipment after a revision, to manufacturers, distributors or employers

– Revise the label when a chemical is not currently used, produced or imported, before:

✎ You resume shipping (or transferring) the chemical

OR

✎ The chemical is reintroduced in the workplace

– Label information

✎ Clearly written in English

AND

✎ Prominently displayed on the container.

Reference: Additional labeling requirements for specific hazardous chemicals (for example, asbestos, cadmium, and formaldehyde) are found in chapter 296-62 WAC, General occupational health standards (see parts F, G, I and I-1 of that chapter).

Note: When the conditions specified in Table 10 are met for the solid material products listed, you are not required to provide labels for every shipment.

Table 10
Labeling for Solid Materials

You need only send labels with the first shipment, IF the product is	**And**
Whole grain	✎ It is shipped to the same customer **AND** ✎ No hazardous chemicals are part of or known to be present with the product which could expose employees during handling
Solid untreated wood	
Solid metal For example: Steel beams, metal castings	
Plastic items	– For example, cutting fluids on solid metal, and pesticides with grain

Exemptions: The chemicals (and items) listed in Table 11 are **EXEMPT** from **THIS SECTION** under the conditions specified. Requirements in other sections still apply.

Table 11
Conditional Label Exemptions

This section does not apply to	**When the product is**
✎ Pesticides – Meeting the definition of "pesticides" in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (see Title 7, U.S.C. Chapter 6, Subchapter II, section 136[1])	✎ Subject to – Labeling requirements of FIFRA[1] **AND** – Labeling regulations issued under FIFRA by the United States Environmental Protection Agency (EPA) (see Title 40 of the Code of Federal Regulations[2])
✎ A chemical substance or mixture – Meeting the definition of "chemical substance" or "mixture" in the Toxic Substance Control Act (TSCA) (see Title 15 U.S.C. Chapter 53, Subchapter II, Section 2602[1])	✎ Subject to – Labeling requirements of TSCA[1] **AND** – Labeling requirements issued under TSCA by the EPA (see Title 40 of the Code of Federal Regulations[2])
✎ Each of the following	✎ Subject to:

– Food – Food additives – Color additives – Drugs – Cosmetics – Medical devices or products – Veterinary devices or products – Materials intended for use in these products (for example: Flavors, and fragrances) ✎ As defined in – The Federal Food, Drug, and Cosmetic Act (see Title 21 U.S.C. Chapter 9, Subchapter II, Section 321[1]) **OR** – The Virus-Serum Toxin Act of 1913 (see Title 21 U.S.C. Chapter 5, Section 151 et seq.[1]) **OR** – Regulations issued under these acts (see Title 21 Part 101 in the Code of Federal Regulations, and Title 9, in the Code of Federal Regulations[3])	– Labeling requirements in Federal Food, Drug, and Cosmetic Act, Virus-Serum Toxin Act of 1913, and issued regulations enforced by the United States Food and Drug Administration (see Title 21 Parts 101-180 in the Code of Federal Regulations[3]) **OR** – Department of Agriculture (see Title 9, in the Code of Federal Regulations[3])
✎ Each of the following: – Distilled spirits (beverage alcohols) **AND** – Wine **AND** – Malt beverage ✎ As defined in – The Federal Alcohol Administration Act (see Title 27 U.S.C. Section 201[1]) **AND** – Regulations issued under this act (see Title 27 in the Code of Federal Regulations[3])	✎ Subject to: – Labeling requirements of Federal Alcohol Administration Act[1] **AND** – Labeling regulations issued under Federal Alcohol Administration Act by the Bureau of Alcohol, Tobacco, and Firearms (see Title 27 in the Code of Federal Regulations[3])

✎ Consumer products **AND** ✎ Hazardous substances – As defined in the Consumer Product Safety Act (see 15 U.S.C. 2051 et seq.[1]) **AND** – The Federal Hazardous Substances Act (see 15 U.S.C. 1261 et seq.[1])	✎ Subject to: – A consumer product safety or labeling requirement of the Consumer Product Safety Act or Federal Hazardous Substances Act[1] **OR** – Regulations issued under these acts by the Consumer Product Safety Commission (see Title 16 in the Code of Federal Regulations[3])
✎ Agricultural seed **AND** ✎ Vegetable seed treated with pesticides	✎ Labeled as required by – The Federal Seed Act (see Title 7 U.S.C. Chapter 37 Section 1551 et seq.[1]) **AND** – Labeling requirements issued under Federal Seed Act by the United States Department of Agriculture[1]

[1]This federal act is included in the United States Code. See http://www.access.gpo.gov/uscode/uscmain.html.
[2]See http://www.epa.gov.
[3]See http://www.access.gpo.gov/nara/cfr/index.html.

NEW SECTION

WAC 296-307-56050 Definitions. The following definitions apply to this chapter:

Article (manufactured item)

A manufactured item that

✎ Is not a fluid or particle

AND

✎ Is formed to a specific shape or design during manufacture for a particular end use function

AND

✎ Releases only trace amounts of a hazardous chemical during normal use and does not pose a physical or health risk to employees.

Chemical

✎ An element or mixture of elements

OR

✎ A compound or mixture of compounds

OR

✎ A mixture of elements and compounds

Included are manufactured items (such as bricks, welding rods and sheet metal) that are not exempt as an article.

Chemical name

✎ The scientific designation of a chemical developed by the - International union of pure and applied chemistry (IUPAC)

OR

– Chemical abstracts service (CAS) rules of nomenclature

OR

✎ A name that clearly identifies the chemical for the purpose of conducting a hazard evaluation.

Combustible liquid

Liquids with a flashpoint of at least 100☜F (37.8☜C) and below 200☜F (93.3☜C). A mixture with at least 99% of its components having flashpoints of 200☜F (93.3☜C), or higher, is not considered a combustible liquid.

Commercial account

An arrangement where a retailer is selling hazardous chemicals to an employer

✎ Generally in large quantities over time

OR

✎ At costs below regular retail price.

Common name

Any designation or identification used to identify a chemical other than the chemical name, such as a

✎ Code name or number

OR

✎ Trade or brand name

OR

✎ Generic name.

Compressed gas

✎ A contained gas or mixture of gases with an absolute pressure greater than:

– 40 psi at 70☜F (21.1☜C)

OR

– 104 psi at 130☜F (54.4☜C) regardless of the pressure at 70☜F (21.1☜C)

OR

✎ A liquid with a vapor pressure greater than 40 psi at 100☜F (37.8☜C), as determined by ASTM D323-72.

Container

A vessel, other than a pipe or piping system, that holds a hazardous chemical. Examples include:

✎ Bags
✎ Barrels
✎ Bottles
✎ Boxes
✎ Cans
✎ Cylinders
✎ Drums
✎ Reaction vessels
✎ Storage tanks
✎ Rail cars.

Designated representative

✎ An individual or organization with written authorization from an employee

OR

✎ A recognized or certified collective bargaining agent (not necessarily authorized by an employee)

OR

✎ A legal representative of a deceased or legally incapacitated employee.

Distributor

A business that supplies hazardous chemicals to other employers. Included are employers who conduct retail and wholesale transactions.

Explosive

A chemical that causes a sudden, almost instant release of pressure, gas, and heat when exposed to a sudden shock, pressure, or high temperature.

Flammable

A chemical in one of the following categories:

✎ Aerosols that, when tested using a method described in 16 CFR 1500.45, yield either a:

– Flame projection of more than eighteen inches at full valve opening

OR

– A flashback (a flame extending back to the valve) at any degree of valve opening

✎ Gases that, at the temperature and pressure of the surrounding area, form a:

– Flammable mixture with air at a concentration of thirteen percent, by volume, or less

OR

– Range of flammable mixtures with air wider than twelve percent, by volume, regardless of the lower limit

✎ Liquids with a flashpoint below 100☜F (37.8☜C). A mixture with at least ninety-nine percent of its components having flashpoints of 100☜F (37.8☜C), or higher, is not considered a flammable liquid

✎ Solids, other than blasting agents or explosives, as defined in WAC 296-52-417 or 29 CFR 1910.109(a), that:

– Is likely to cause fire through friction, moisture, absorption, spontaneous chemical change or retained heat from manufacturing or processing

OR

– That can be readily ignited (and when ignited burns so vigorously and persistently that it creates a serious hazard)

OR

– When tested by the method described in 16 CFR 1500.44, ignite and burn with a self-sustained flame at a rate greater than 1/10th of an inch per second along its major axis.

Flashpoint

The minimum temperature at which a liquid gives off an ignitable concentration of vapor, when tested by any of the following measurement methods:

- Tagliabue closed tester. Use this for liquids with a viscosity less than 45 Saybolt Universal Seconds (SUS) at 100°F (37.8°C), that do not contain suspended solids and do not tend to form a surface film under test. See American National Standard Method of Test for Flashpoint by Tag Closed Tester, Z11.24-1979 (ASTM D 56-79)
- Pensky-Martens closed tester. Use this for liquids with a viscosity equal to, or greater than, 45 SUS at 100°F (37.8°C) or for liquids that contain suspended solids or have a tendency to form a surface film under test. See American National Standard Method of Test for Flashpoint by Pensky-Martens Closed Tester, Z11.7-1979 (ASTM D 93-79)
- Setaflash closed tester. See American National Standard Method of Test for Flashpoint by Setaflash Closed Tester (ASTM D 3278-78)

Organic peroxides, which undergo auto accelerating thermal decomposition, are excluded from any of the flashpoint measurement methods specified above.

Hazardous chemical

A chemical, which is a physical or health hazard.

Hazard warning

Words, pictures or symbols (alone or in combination) that appear on labels (or other forms of warning such as placards or tags) that communicate specific physical and health hazards (including target organ effects) associated with chemicals in a container.

Health hazard

A chemical that may cause health effects in short or long-term exposed employees based on statistically significant evidence from a single study conducted by using established scientific principles.

Health hazards include, but are not limited to, any of the following:

- Carcinogens
- Toxic or highly toxic substances
- Reproductive toxins
- Irritants
- Corrosives
- Sensitizers
- Hepatotoxins (liver toxins)

- Nephrotoxins (kidney toxins)
- Neurotoxins (nervous system toxins)
- Substances that act on the hematopoietic system (blood or blood forming system)
- Substances that can damage the lungs, skin, eyes, or mucous membranes.

Identity

A chemical or common name listed on the material safety data sheet (MSDS) and label.

Importer

The first business, within the Customs Territory of the United States, that receives hazardous chemicals produced in other countries and supplies them to manufacturers, distributors or employers within the United States.

Label

Written, printed, or graphic material displayed on, or attached to, a container of hazardous chemicals.

Manufacturer

An employer with a workplace where one or more chemicals (including items not exempt as "articles," see Table 1 in this chapter) are produced for use or distribution.

Material safety data sheet (MSDS)

Written, printed or electronic information (on paper, microfiche, or on-screen) that informs manufacturers, distributors or employers about the chemical, its hazards and protective measures as required by this rule.

Mixture

A combination of two or more chemicals that retain their chemical identify after being combined.

Organic peroxide

An organic compound containing the bivalent-O-O- structure. It may be considered a structural derivative of hydrogen peroxide if one or both of the hydrogen atoms has been replaced by an organic radical.

Oxidizer

A chemical, other than a blasting agent or explosive as defined in WAC 296-52-417 or 29 CFR 1910.109(a), that starts or promotes combustion in other materials, causing fire either of itself or through the release of oxygen or other gases.

Permissible exposure limits

See chapter 296-62 WAC Part H, for definition of this term.

Physical hazards

A chemical that has scientifically valid evidence to show it is one of the following:

- A combustible liquid
- A compressed gas
- Explosive
- Flammable

- An organic peroxide
- An oxidizer
- Pyrophoric
- Unstable (reactive)
- Water-reactive.

Produce

To do one or more of the following:

- Manufacture
- Process
- Formulate
- Blend
- Extract
- Generate
- Emit
- Repackage.

Pyrophoric

Chemicals that ignite spontaneously in the air at a temperature of 130☜F (54.4☜C) or below.

Responsible party

Someone who can provide more information about the hazardous chemical and appropriate emergency procedures.

Retailer

See "distributor."

Threshold limit values (TLVs)

Airborne concentrations of substances established by the American Conference of Governmental Industrial Hygienists (ACGIH), and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse health effects.

TLVs are specified in the most recent edition of the *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices* and include the following categories:

- Threshold limit value-time-weighted average (TLV-TWA)
- Threshold limit value-short-term exposure limit (TLV-STEL)
- Threshold limit value-ceiling (TLV-C).

Unstable (reactive)

A chemical in its pure state, or as produced or transported, that will vigorously polymerize, decompose, condense, or become self-reactive under conditions of shocks, pressure or temperature.

Use

To do one or more of the following:

- Package
- Handle
- React
- Emit
- Extract
- Generate as a by-product
- Transfer.

Water-reactive

A chemical that reacts with water to release a gas that is either flammable or presents a heath hazard.

Wholesaler

See "distributor."

REPEALER

The following sections of the Washington Administrative Code are repealed:

WAC 296-307-45001	What general requirements apply to hazardous materials and flammable and combustible liquids?
WAC 296-307-45003	What requirements apply to dip tanks containing flammable or combustible liquids?
WAC 296-307-45007	What requirements must ventilation systems meet?
WAC 296-307-45009	What general requirements apply to the construction of dip tanks?
WAC 296-307-45011	How must overflow pipes for dip tanks be constructed?
WAC 296-307-45013	How must the bottom drains of dip tanks be constructed?
WAC 296-307-45017	What measures must an employer take to prevent hazards from electrical and other ignition sources?
WAC 296-307-45019	How must dip tanks be operated and maintained?
WAC 296-307-45021	What requirements must fire extinguishing systems meet?
WAC 296-307-45023	What requirements apply to hardening and tempering tanks?
WAC 296-307-45027	What requirements apply to electrostatic apparatus?
WAC 296-307-45029	What requirements apply to roll coating applications?

REPEALER

The following sections of the Washington Administrative Code are repealed:

WAC 296-62-070	Chemical agents (airborne or contact).
WAC 296-62-07001	Definitions (airborne chemical agents).
WAC 296-62-07003	Definitions (contact chemical agents).
WAC 296-62-07005	Control of chemical agents.
WAC 296-62-080	Biological agents.
WAC 296-62-11021	Open surface tanks.
WAC 296-62-130	Emergency washing facilities.

REPEALER

The following sections of the Washington Administrative Code are repealed:

WAC 296-62-054	Manufacturers, importers and distributors--Hazard communication.
WAC 296-62-05402	Determine whether the chemicals you produce in your workplace or import are hazardous.
WAC 296-62-05404	Use these criteria in making hazard determinations.
WAC 296-62-05406	Determine whether the chemicals you produce or import are health hazards.
WAC 296-62-05408	Obtain or develop a material safety data sheet for each hazardous chemical you produce or import.
WAC 296-62-05410	Label clearly each container of hazardous chemicals that leaves your workplace.
WAC 296-62-05412	Provide material safety data sheets.